

Pilot^{4D} M4

Pilot^{4D} Line



The Pilot^{4D} M4 is a full-performance, double-sided, flying probe test system with an extremely high level of flexibility, making it the ideal solution for those with a wide variety of testing needs, from **prototypes to small/medium production volume**, through the repair of field returns and **reverse engineering**. It has a vertical architecture with two flying test probes on each side, two additional openfix probes, and two cameras (one on each side respectively). This configuration allows the Pilot^{4D} M4 to perform true in-circuit tests, giving full access even to boards that do not have all the test points on one side. It has the capability of placing guarding points and use all of the vectorless test techniques for ICs, with or without powering up the UUT. The reduced footprint of the Pilot^{4D} M4 makes it an easy fit into any work environment. The vertical, compact architecture and the excellent board clamping system ensure that there is no oscillation of the board under test, which in turn greatly facilitates the precise positioning of the probes on the test points.

The test tools and techniques of the Pilot^{4D} M4 include:

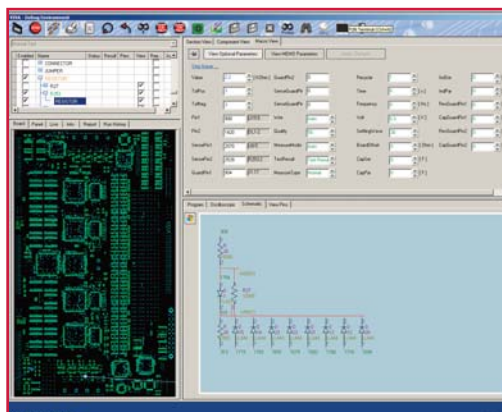
- FNODE signature analysis on the nets of the UUT
- PWMON net analysis for power on the boards
- Vectorless tests (JSCAN and OPENFIX), to test ICs for opens and shorts
- Continuity test to detect open tracks on the PCB
- Analog and digital in-circuit test
- Optional functional and visual test capabilities and NETLIST learning procedure used to rebuild layouts and electrical schematics of boards when the relative technical documentation is incomplete or unavailable.
- Optional Thermal Scan Resources



All of these techniques can be combined in a single test program, to achieve maximum test coverage and test throughput. **The Pilot^{4D} M4 can be provided with a comprehensive graphic software environment for fault location and repair which can graphically display the test results (RPS module), store the history of all the tests executed (QSTAT module), and supply useful tips and information for the operator.** Using the Diagnostic Expert System (DES) software, boards returned from the field can be repaired easily and quickly.

VIP PLATFORM

The Pilot^{M4} M4 is based on the Seica VIP platform, which includes the innovative VIVA software. Test program development is organized in 3 simple steps: "Prepare", "Verify" and "Test", where the user is guided through a series of automated operations in an intuitive, self-explanatory environment, drastically reducing programming time and minimizing errors and omissions, ensuring the quality of the final test program. For special applications, the **extremely open architecture of the VIP platform** enables easy integration of external software modules and/or hardware, such as RS232, USB ports or GPIB and PXI/VXI protocols.



SEICA WORLDWIDE



SEICA SpA

via Kennedy 24
10019 Strambino - TO
ITALY
Tel: +39 0125 6368.11
Fax: +39 0125 6368.99
Email: sales@seica.com

PROXIMA S.r.l.

via Gorra, 55B
29122 Piacenza
ITALY
Tel: +39 0523 71 15 35
Fax: +39 0523 71 16 68
Email: info@proxima-ate.com



SEICA Inc.

50A Northwestern Drive
Suite 10 - Salem NH
03079 - USA
Tel: +1 603-890-6002-76-78
Fax: +1 603-890-6003
Email: sigillo@seica.com



SEICA FRANCE SARL

30, Avenue Robert Surcouf
78960 Voisins Le Bretonneux
FRANCE
Tel.: +33 1 39 30 66 77
Fax: +33 1 39 30 66 78
Email: dupoux@seica.com



SEICA DEUTSCHLAND GmbH

Am Postanger 18
83671 - Benediktbeuern
GERMANY
Tel.: +49 8857 6976742
Fax: +49 8857 6976745
Email: hauptmann@seica.com



SEICA ELECTRONICS (Suzhou) Co.Ltd.

XingHan Street Suzhou
Industrial Park,
Jiangsu Province, 215021
CHINA
Tel.: +86 512 67610421
Fax: +86 512 67610423
Email: seicachina@seica.com

Seica reserves the right to change the technical specifications without notice

PROBES AND CAMERAS

Probes Position - Test Side	Front/Rear
Maximum Number of Probes	10
Number of Electrical Probes	4 (2 front, 2 rear)
Number of Openfix Probes	2 (1 front, 1 rear)
Number of Fixed Channels / Upgrade Up To	8 / 328
Maximum Digital Embedded Channels	4
Number of CCD Cameras	2 (1 front, 1 rear)
Automatic Marker Recognition	Yes
Automatic UUT Planarity Compensation	Yes
Thermal Scan Module (option)	2 (1 front, 1 rear)

BOARD CLAMPING SYSTEM, UUT SIZE AND WORK AREA (*)

Board Clamping System	Manual
Active Test Area	538 x 610 mm (21.18 X 24")
Maximum Board Size	540 x 610 mm (21.25 X 24")
Minimum Board Size (*)	20 x 20 mm (0.78 x 0.78")
Maximum Board Thickness	5 mm (0.19")
Minimum Board Thickness	0.3 mm (0.00118")
Maximum Component Height	90mm (3.57") top
Board Loading	Vertical
Automatic Loader	Not available
UUT Edge Clearance	2 mm

PITCH

Minimum Pad Pitch	200 μ m (8 mils)
Minimum Pad Size	75 μ m (3 mils)

PROBE FEATURES

Z-axis Travel	-3.0 mm to 40 mm programmable
Contact Force	25 g - 100 g programmable

TESTS AND MEASUREMENTS (INSTRUMENTS DSP)

Voltage Generator 1 DC/AC (DRA)	± 1 mV to ± 10 V ($\pm 0.1\%$)
Voltage Generator 2 DC/AC (DRB)	± 1 mV to ± 10 V ($\pm 0.1\%$)
Voltage Generator 3 DC/AC (DRC)	± 25 mV to ± 100 V ($\pm 0.2\%$)
Current Generator DC/AC	± 1 nA to ± 0.5 A ($\pm 0.1\%$)
Waveform Generator 1 Sin, Tri, Arbitrary (DRA)	1 Hz to 3 MHz (± 1 mHz) - ± 10 V max
Waveform Generator 2 Sin, Tri, Arbitrary (DRC)	1 Hz to 10 KHz (± 10 mHz) - ± 100 Vmax
Voltage Measurements DC/AC	± 200 μ V to ± 100 V
Current Measurements DC/AC	± 3 nA to ± 0.5 A
Frequency Measurement	0.1 Hz to 10 MHz
Digital Embedded Channel	± 12 V - 500 mA - 10 MHz
Resistance Measurement	1 m Ω to 100 M Ω
Capacitance Measurement	1 pF to 1 F
Inductor Measurement	1 μ H to 1 H
Zener Measurement	up to 100 V(200 V option)
Automatic Visual Inspection	Yes

GENERAL REQUIREMENTS

Air Flow	0.35 CFM - 10l/min.
Temperature Range	25°C $\pm$ 10°C
Humidity	30 - 80 %
System Power	220 V/50 Hz 12 A, 110 V/60 Hz 24A
Power Consumption	3 kW max
Weight	1050 kg (2315 lbs)
Length	175 cm (68.9")
Width	123 cm (48.4")
Height	203 cm (79.9")

SOFTWARE FEATURES

PC/Operating System	Windows 7
Software	VIVA
Automatic Test Generation	Yes
Autodebug	Yes
Data Input Format	CAD Data/Manual

*Universal carrier for unique board configurations

